LECTOTYPE DESIGNATIONS AND NEW SYNONYMY IN THE GENUS ATAENIUS (COLEOPTERA: SCARABAEIDAE)

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Recently, through the courtesy and cooperation of Drs. E. B. Britton and A. M. Villiers, I had the privilege of studying type series of many species of *Ataenius* in the British Museum (Natural History), London, England, and in the Museum National d'Histoire Naturelle in Paris, France. In the course of this study I designated and labeled specimens of various species as lectotypes.

In the British Museum the following were chosen and labeled as lectotypes; all labels were printed except as noted; my notations are given in brackets:

Ataenius strigicauda Bates, 1887: 96. 6 labels: Type [orange circle]/Sp. figured/Cordova/Mexico. Salle Coll/Ataenius strigicauda [hand written]/B.C.A. Col.II.(2). Ataenius strigicauda, Bates/.

Ataenius jalapensis Bates, 1887: 100. 5 labels: Jalapa Mexico. Hoege/jalapensis [hand written]/B.C.A. Col.II(2). Ataenius polyglyptus Bates/Type [red circle]/Ataenius abditus C.L.38 Horn/.

Ataenius polyglyptus Bates, 1887: 99. 4 labels: Type [orange circle]/Dueñas, Guatemala. C. Champion/polyglyptus Bates [hand written]/B.C.A. Coll.II(2). Ataenius polyglyptus, Bates/.

Ataenius intermedius Bates, 1887: 100. 4 labels: Type [orange circle]/V. de Chiriqui, 25-4000 ft. Champion/ polyglyptus v. intermedius Bates [hand written]/B.C.A., Coll.II(2). Ataenius polyglyptus Bates/.

Ataenius hieronymi Bates, 1887: 100. 4 labels: Type [orange circle]/S. Geronimo, Guatemala. Champion/ Ataenius hieronymi Bates [hand written]/B.A.C., Col.II(2). Ataenius polyglyptus, Bates/.

Ataenius mariarum Bates, 1887: 102. 4 labels: Type [orange circle]/ Tres Marias Is., W. Mexico, Forrer/Ataenius mariarium Bates [hand written]/B.C.A., Col.II(2). Ataenius [blank space]/.

Ataenius scalptifrons Bates, 1887: 100. 6 labels: Type [orange circle]/sp. figured/Cordova/Mexico. Salle Coll./Ataenius scalptifrons Bates [hand written]/B.C.A. Col.II(2). Ataenius [blank space]/.

Ataenius euglyptus Bates, 1887: 97. 4 labels: Type [orange circle]/Las Vigas, Mexico. Hoege/Ataenius euglyptus Bates [hand written]/B.C.A., Coll.II(2). Ataenius [blank space]/.

Ataenius limbatus Bates, 1887: 98. 4 labels: Type [orange circle]/Presidio, Mexico, Forrer./Ataenius limbatus Bates [hand written]/B.C.A., Col. II(2). Ataenius [blank space]/.

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- Ataenius cribrithorax Bates, 1887: 95. 6 labels: Type [red circle]/Cordova/Salle Coll./Ataenius cribrithorax Bates [hand written]/Ataenius cribrithorax keys apond Salle [hand written]/B.C.A., Col.II(2). Ataenius cribrithorax Bates./.
- Ataenius setiger Bates, 1887: 98. 4 labels: Type [orange circle]/Chilpancingo, Guerrero, Hoege./Ataenius setiger Bates [hand written]/B.C.A., Col.II(2). Ataenius [blank space]/.
- Ataenius liogaster Bates, 1887: 94. 2 labels: Paso Antonio, 400 ft. Champion/B.C.A., Col.II(2). Ataenius liogaster Bates/.
- Aphodius pacificus Sharp, 1879: 90. 3 labels, including data on card bearing 2 specimens [left hand specimen chosen as the lectotype]: Aphodius pacificus Sharp. Types D.S. Honolulu, Blackburn/Type [orange-red circle]/Sharp Coll. 1905-313/.

In the Paris Museum the following were chosen and labeled as lectotypes:

- Ataenius castaniellus Bates, 1887: 95. 2 labels: Zapote, Guatemala, C. Champion/Ataenius castaneellus Bates [hand written—the spelling appears to be "ee" or "ae," no "i" with a dot]/.
- Oxyomus striatocrenatus Fairmaire, 1889: 14. 4 labels: Museum Paris, Mou-pin, A. David 1870/980 [folded yellow circle]/ Ataenius striatocrenat Fairm. [hand written]/Oxyomus striatocrenatus Frm. [hand written]/.
 - A. Schmidt, 1922: 431, placed *striatocrenatus* Fairmaire in the genus *Ataenius*; however, because the mandibles are visible beyond the clypeus, this very large species from the interior of China should be placed in *Aegialia* or a genus near it. It is not an *Ataenius*.
- Psammodius alleonis Fairmaire, 1875: 193. 3 labels: Euria Alleon [hand written—abbreviated or illegible—type locality given in original description is "environs de Constantinople"]/Museum Paris, 1906, Coll. Leon Fairmaire/Psammodius Alleonis Fairm. n.sp. Ann. 1875 [hand written]/.

I had hoped also to designate lectotypes for the Harold species of Ataenius in the Paris Museum but found only part of his species and many of these were without locality labels. Apparently M. Oberthur had broken up the Harold collection and distributed the specimens in various places in his own collection. Those that I found were scattered among other Ataenius species in three places in his collection: among his own Aphodiinae, among the Bates Ataenius there, and a few in a box of Melolonthinae. The other Harold specimens probably are elsewhere in the Oberthur collection but I failed to find them.

The specimens identifiable as Harold specimens usually carry a small line-bordered printed label—"Ex Musaeo E. Harold." I consider those specimens bearing Harold's handwritten determination labels as true rep-

resentatives of his species. Even though some of these have no locality labels, I believe we can do no better than to accept them with the status of lectotypes. With a single exception, the following Harold species of Ataenius were identified by Harold determination labels: simulator, capitosus, opatrinus, intiger, opacus, picinus, scutellaris, laborator, punctipenis, arenosus, crenatus, attenuator, complicatus, columbicus, sculptor, horni, sordidus, and figurator. The last named does not bear a determination label but it is from Musaeo E. Harold and is labeled "Louisiana," the type locality of figurator.

In my study of types of Ataenius I found the following interesting synonymy for two species of unusually wide distribution.

Ataenius simulator Harold, 1868: 85.

Psammodius schwarzi Linell, 1896: 721. (NEW SYNONYMY.)

Diagnostic characters: very distinct, coarse transverse granules covering the clypeus; a few very coarse punctures near posterior angle and base of pronotum; middle and hind femora without posterior marginal lines.

Ataenius simulator Harold was described from Mendoza, Argentina, and schwarzi (Linell) from Jacksonville, Florida. I have seen North American specimens from the states of Virginia, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana. South American specimens were examined from Argentina, Chile, Uruguay, Bolivia, and Brazil. A small series from Windsor, New South Wales, Australia was seen.

Ataenius simulator Harold is rarely if ever a dung feeder and though the adults are exceedingly common at times, the larvae are rarely found. They are sometimes attracted to lights in such numbers as to bring complaints and requests for control. An irate citizen once sent me a cupful of specimens taken in a country church near Anderson, South Carolina, with the statement that they had entered the church through open windows and simply rained down over the congregation. I received a similar lot from Goldsboro, North Carolina. At Blackville, South Carolina, June 4, 1938, more than 275,000 were collected in a trap light during one night. The estimate was made by weighing the entire lot, then weighing and counting a smaller part of the catch. The species is apparently spreading westward and northward from southeastern United States.

Ataenius picinus Harold, 1867:281.

Ataenius duplopunctatus Lea, 1923:6. (NEW SYNONYMY)

Ataenius salutator Fall, 1930:99. (NEW SYNONYMY)

Ataenius queirosii Paulian, 1934:219. (NEW SYNONYMY)

Ataenius darlingtoni Hinton, 1937:179. (NEW SYNONYMY)

Ataenius boucomontii Paulian, 1937:41. (NEW SYNONYMY)

Diagnostic characters: crenate fimbriate lateral pronotal margins; finely densely punctate ninth elytral intervals; posterior tibial fringe invariably a group of four fimbriae.

I have examined holotype or cotype of all of the synonyms listed. Ataenius picinus Harold was described from Chile, A. duplopunctatus Lea from western Australia, A. salutator Fall from Florida, A. queirosii Paulian from New Hebrides, A. darlingtoni Hinton from Puerto Rico, and A. boucomonti Paulian from Australia.

I have seen specimens of *picinus* Harold from the United States from South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas. It occurs in the West Indies, in Cuba, Jamaica, Hispaniola, Puerto Rico, Virgin Islands, Antigua, Guadaloupe, and Grenada. South American specimens from Brazil, Bolivia, Paraguay, Uruguay, Argentina, and Chile have been examined. I have seen it also from Australia, New Zealand, Fiji, New Caledonia, and New Hebrides.

Ataenius picinus Harold is a dung feeder. I have collected it in large numbers in suitable areas in fresh to day-old cow dung.

LITERATURE CITED

BATES, HENRY WALTER

1887. In Biol. Centr.-Amer., Ins., Coleop. 2(2):94-102, illus.

FAIRMAIRE, M. LEON

1875. (. . . diagnoses de trois Coléoptères nouveaux. . . .) Bull. Soc. Ent. France (5)5:CXCIII.

1889. Coléoptères de l'untérieur de la Chine. Ann. Soc. Ent. France 9:5-84.

FALL, HENRY CLINTON

1930. On Ataenius strigatus Say and allied species. Jour. N. Y. Ent. Soc. 38:93-108.

VON HAROLD, EDGAR

1867. Die chilensischen Aphodiden. Berliner Ent. Zeit. 11:278-282.

1868. Diagnosen neuer Coprophagen. Col. Hefte 3:80-86.

HINTON HOWARD E.

1937. Descriptions of new American Ataenius, with notes on others. Ann. Mag. Nat. Hist. (10)20:177-196.

LEA. ARTHUR M.

1923. On Australian Aphodiides. Proc Roy. Soc. Victoria 35:(1):2-20.

LINELL, MARTIN L.

1896. New species of North American Coleoptera of the family Scarabaeidae. Proc. U.S. Nat. Mus. 18(1096):721-731.

PAULIAN, RENAUD

1934. Deaux nouveaux coprophages des Nouvelles-Hebrides. Rev. Franc. Ent. 1:219-221.

1937. Trois nouveaux Ataenius de la region australienne. Misc. Ent. 38(5): 41-43.

SCHMIDT, ADOLF

1922. Aphodiinae. Das Tierreich, Lief 45:1-164.

SHARP, D.

1879. On some Coleoptera from the Hawaiian Islands. Trans. Ent. Soc. London 1879:77-105.